

1 (cancelled).

2 (currently amended). A water purification system comprising:

an integral, compact enclosure containing a plurality of vertically oriented, serially coupled compartments configured to direct a flow of water alternately in upward and downward directions, with a first of said compartments having a water inlet and a last of said compartments having a water outlet, each said compartment extending the full vertical dimension of said enclosure;

~~a venturi coupled to said water inlet, said flow of water passing through said venturi,~~

an ozone generator in one of said compartments ~~downstream from said venturi and further comprising an ultraviolet lamp positioned in a watertight housing located in one of said compartments, with walls of said watertight housing transparent to ultraviolet radiation from said ultraviolet lamp, an air entrance in said watertight housing and an ozone/air outlet in said watertight housing, said ozone/air outlet coupled to provide ozone to said venturi and in turn to said flow of water;~~

a supply of at least one substance that reacts beneficially with ozone;

and

a venturi coupled to said water inlet and comprising an annular chamber surrounding said flow of water, said annular chamber communicating with said flow of water via a flow passage, a plurality of spaced-apart inlet ports

22 communicating with said annular chamber, a first of said inlet ports connected
23 to said ozone/air outlet, a second of said inlet ports coupled to said supply of
24 at least one substance, said venturi configured such that said ozone and said
25 beneficial substance are mixed in said annular chamber prior to being
26 introduced into said flow of water.

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1 3 (cancelled).

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1 4 (currently amended). A water purification system as set forth in claim 2 3
2 wherein said flow passage is an annular flow passage ~~mixing chamber is an~~
3 ~~annular mixing chamber~~ surrounding said flow of water and wherein said
4 ~~ozone and said substance that reacts beneficially with ozone are mixed together~~
5 ~~prior to being introduced to said flow of water, with~~ reaction products of said at
6 least one substance and said ozone are introduced annularly to said flow of
7 water.

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1 5 (currently amended). A water purification system as set forth in claim 4
2 wherein said at least one substance is a liquid sanitizer.

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1 6 (original). A water purification system as set forth in claim 2 wherein one or
2 more of said compartments contain turbulence-inducing devices.

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1 7 (original). A water purification system as set forth in claim 6 wherein some of

2 said turbulence-inducing devices include alternately positioned baffles along
3 walls of at least one of said compartments to force said flow of water to flow
4 generally in back and forth relation through said at least one of said
5 compartments.

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1 8 (original). A water purification system as set forth in claim 6 wherein some of
2 said turbulence-inducing devices are configured to force said flow of water to
3 flow generally spirally through a at least one of said compartments.

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1 9 (currently amended). A water purification system as set forth in claim 8
2 wherein said watertight housing is generally centrally located in a said
3 compartment containing a one of said turbulence-inducing devices to cause
4 water to spiral around said housing.

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1 10 (original). A water purification system as set forth in claim 2 wherein a last
2 of said compartments contains de-gassing apparatus.

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1 11 (currently amended). A water purification system as set forth in claim 2 12
2 wherein said compartments through which water is flowing downward are
3 smaller in cross section and said compartments through which water is flowing
4 upward are larger in cross section.

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1 12 (original). A water purification system as set forth in claim 2 wherein said

enclosure and said vertically oriented compartments are about 18 inches in height.

13 (currently amended). A water purification system comprising:

an integrally constructed, compact housing of relatively narrow width, said housing vertically divided into at least three compartments, with a water inlet in a first of said compartments and a water outlet in a last of said compartments, said compartments communicating with each other so that a flow of water through said compartments is serial and alternates in upward and downward directions;

an ultraviolet ozone generator having an air inlet and an ozone/air outlet mounted within one of said compartments, said ozone generator providing ultraviolet radiation to said flow of water;

a mixing device coupled to said water inlet and comprising a flow path therethrough for said flow of water;

an annular chamber in said mixing device and surrounding said flow path, said annular chamber communicating with said flow path via a flow passage;

a plurality of spaced-apart inlet ports communicating with said annular chamber;

a first of said inlet ports connected to said ozone/air outlet; and

a second of said inlet ports coupled to a beneficial substance supply, said mixing device configured such that ozone produced in said generator and

21 said beneficial substance are mixed in said annular chamber prior to being
22 introduced into said flow of water ~~connected to said water inlet and having a~~
23 ~~plurality of inlet ports, said inlet ports communicating with a mixing chamber~~
24 ~~in said mixing device, said ozone/air outlet coupled to one of said inlet ports~~
25 ~~and a supply of a substance that reacts beneficially with ozone from said ozone~~
26 ~~generator coupled to another of said inlet ports.~~

1 14(cancelled).

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1 15 (currently amended). A water purification system as set forth in claim 13 14
2 further comprising turbulence-inducing devices in at least one of said
3 compartments.

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1 16 (canceled)

1 17(canceled)

1 18(canceled)

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1 19 (currently amended). A water purification apparatus as set forth in claim
2 10 wherein said ozone generator ~~watertight housing with said ultraviolet lamp~~
3 ~~therein~~ is located in a one of said compartments immediately preceding said
4 last of said compartments containing said de-gassing apparatus.

20 (previously submitted). A water purification system as set forth in claim 2 wherein said venturi is an adjustable venturi to vary a quantity of said ozone and said substance that reacts beneficially with ozone provided to said flow of water.

21 (currently amended). A water purification system as set forth in claim 13 wherein said mixing device venturi is adjustable to vary the mixed quantities of said ozone ~~produced by said ozone generator~~ and said beneficial substance that reacts beneficially with said ozone provided to said flow of water.